

REMARKS

Objections and Rejections

The objections and rejections will be addressed in the same order as they are in the Office Action.

Election Requirement

The applicant understands that only the invention of Group I will be addressed with this patent application.

Drawings

The drawings were objected to as elements 36 and 48 were both utilized to designate a spring. The spring is designated solely by element 48 with the replacement drawings and amendment to the specification.

It is also observed on page 8 that the flange and the channel have both been identified as reference numeral 64. The flange has been renumbered to numeral 61 as reflected by the replacement drawings and the amendment to paragraph 39.

The memory shaped alloy member was objected to as it copied as a very dark black spot on most of the drawings. This has been addressed with the amendment to the drawings which is not believed to add any new matter.

The replacement sheets are provided as formal drawings so hopefully they will clear up any remaining drawing deficiencies.

Specification

The disclosure was objected to for containing an imbedded hyperlink. In the enclosed amendment to paragraph 30, the hypertext link is removed and just provides “nanomuscle.com” which is not believed to create a hypertext link.

Claim Suggestions

The claim suggestions for claim3 and claims 6-7 have been addressed in accordance with the Examiner’s recommendations with the enclosed amendment to the claims. “Allow” should have been “alloy” and “the end plug” is “the plug.”

Claim Rejections Under 35 USC § 102

Claims 1-12, 22 and 27-30 are rejected as being anticipated by Hines et al., U.S. Patent No. 6,464,200. The applicant has clarified the construction of the plug relative to the housing with amended claim 1 so that the outer perimeter as claimed in claim 1 is round. If one takes the construction of the valve into consideration as shown in the ‘200 Patent, it cannot meet the cross-sectional area limitation. The holder, actuator and poppet assembly are required by claim 1 to fit within a cross section less than and bounded by the cross-section of the round first cross-sectional area of the plug. At least one of these components in Hines is too big. Accordingly, claims 1-12, and 22 are not anticipated by the ‘200 Patent as clarified by the enclosed amendment. Claims 27-30 are cancelled in that amendment.

Claims 1-12, 18-19, 22 and 27 are rejected as being anticipated by Johnson, U.S. Published Patent Application No. U.S. 2002/0130284. The applicant believes the published patent application at issue is U.S. 2002/0171055 and not U.S. 2002/0130284 since the structure of the ‘284 application does not correlate to the claims.

The applicant would agree that U.S. Published Patent Application No. US 2002/01711055 is a particularly relevant reference as it relates to the claims as originally provided. Claim 1 has been amended to clarify the structure as claimed which now requires that the first cross-sectional area of the plug be round and greater than the cross section of the holder. This cannot happen with the structure shown and described in the Johnson Published Patent Application as the cross section of the shell **22** (i.e., a holder) where it connects to the cap **26** is the same cross sectional area of the plug at that cross section. The structure **36** is not a holder as it is described as being a lower end of a cylindrical pintle **64** which moves axially up and down in response to operation of the actuator **14**. The lower end **36** is not cantileveredly connected to the plug as claimed by the applicant.

The amended claims are believed to preclude such a structure such as Johnson from falling with the amended claims. Accordingly, as affected by the amendment to claim 1, claims 1-12, 18-19 and 22 are no longer believed to be anticipated by Johnson. Claim 27 has been cancelled in the enclosed amendment.

Claim Rejections Under 35 USC § 103

Claims 12-14 and 18 as well as claims 15-17 and claims 20 and 23 were rejected as being obvious over Hines in view of Schloss (and others). As explained above, as a relationship to claim 1, Hines cannot meet the limitations of amended claim 1 from which claims 12-14, 15-17, 18, 20 and 23 depend. Accordingly, at least one limitation is missing from both the Hines and Schloss references and the others (i.e., the cross sectional area limitation). These claims are also believed to be allowable.

Allowable Subject Matter

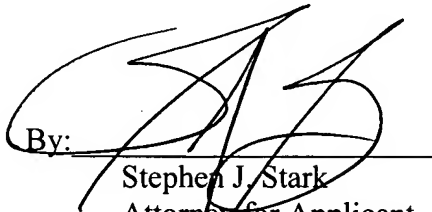
The applicant appreciates the Examiner indicating that claims 20-21 and 23 are allowable except that they depend from rejected based claims. Claims 20 and 21 have been provided in independent form. Claim 23 depends from claim 21. These claims are now believed to be in proper form for allowance.

Conclusion

This is believed to be a complete response to the Office Action dated December 4, 2006, and no additional fees are believed to be due. However, if additional fees are deemed to be due, Deposit Account No. 133403 may be used for such purposes.

Respectfully submitted,

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By: 

Stephen J. Stark
Attorney for Applicant
Miller & Martin PLLC
Suite 1000 Volunteer Building
832 Georgia Avenue
Chattanooga, Tennessee 37402-2289
423.756.6600



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on this 2nd day of March, 2007.

By: _____

Beverly L. Middleton
Beverly L. Middleton